

Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address: **Tintina Montana Inc.
17 E Main St.
White Sulphur Springs, MT 59645**
2. Type of action: **Application for Beneficial Water Use Permit No. 41J 30116563**
3. Water source name: **Sheep Creek**
4. Location affected by project: **Sections 1, 2, 11, 12, and 13 Twp 12N Rge 5E; Sections 3, 4, 5, 6, 10, 11, 12, 13, 18, 19, 20, 21, 22, 24, 25, 26, 27, 35, and 36 Twp 12N Rge 6E; Sections 18, 19, 30, and 31 Twp 12N Rge 7E, all in Meagher Co**
5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

Applicant proposes to appropriate water from Sheep Creek during high spring flows to store in an off-stream reservoir. Water will be released from the reservoir throughout the year to partially mitigate stream depletions from the Black Butte Copper Project's withdrawal of groundwater for Industrial use. In addition to mitigation of stream depletions related to the copper mine's diversion, the Applicant proposes to maintain any wetlands that may be impacted by monitoring and mitigating effects. Water will be diverted from Sheep Creek via a pipeline and wet well and pumped to the off-stream reservoir when water is legally available from May 1 through July 31. A 291.9 AF storage reservoir, referred to as the Non-Contact Water Reservoir (NCWR), is proposed for construction on an Unnamed Tributary of Little Sheep Creek. Releases from the NCWR will mitigate adverse effects caused from modeled depletions to Sheep Creek, Black Butte Creek, Coon Creek, and area wetlands. The maximum flow rate proposed for this permit application is 7.5 CFS and a total annual volume of 291.9 AF.

This Environmental Assessment (EA) considers the potential impacts related to the Montana Department of Natural Resources and Conservation (DNRC) proposed action of granting Beneficial Water Use Permit No. 41J 30116563. The Montana Department of Environmental Quality (DEQ) has prepared an Environmental Impact Statement (EIS) for the mine operating permit associated with the Black Butte Copper Project. This EA incorporates by reference relevant sections of DEQ's EIS.

6. Agencies consulted during preparation of the Environmental Assessment:
(include agencies with overlapping jurisdiction)

DEQ – Black Butte Copper Project EIS

DEQ Website – Clean Water Act Information Center

Montana Fish, Wildlife & Parks (DFWP) Website – Dewatered Streams

MT National Heritage Program Website - Species of Concern

**United States Department of Interior (USDI) Fish & Wildlife Service Website -
Endangered and Threatened Species**

USDI Fish & Wildlife Service – Wetlands Online Mapper

**United States Department of Agriculture (USDA) Natural Resources Conservation
Service – Web Soil Survey**

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity - Assess whether the source of supply is identified as a chronically or periodically dewatered stream by DFWP. Assess whether the proposed use will worsen the already dewatered condition.

Determination: **No Significant Impact.**

The source of water associated with this permit is Sheep Creek in Meagher County. Per the DFWP Dewatered Streams website, Sheep Creek is identified as periodically dewatered from river mile 26.75 to its mouth. DFWP holds a year-round instream flow reservation for the fishery of 35 CFS.

The permit application proposes to store water between May 1 and July 31, only when there are high spring flows available for appropriation in Sheep Creek. The Applicant has monitored flow conditions at various sites in the drainage since 2011 and will be required to adhere to legal demand trigger flow conditions in both Sheep Creek and the Smith River prior to diverting water from Sheep Creek. The Applicant also proposes to purchase a temporary water service contract for 291.9 AF from the Bureau of Reclamation. Water will be released from Canyon Ferry Reservoir to fully mitigate any depletions to the Missouri River because of this permit. Trigger flow conditions and a temporary water service contract should help ensure there are no additional adverse impacts to any dewatered source conditions.

Impacts of the Black Butte Copper Project related to surface water quantity are discussed in Section 3.5 of the Black Butte Copper Project EIS, which is incorporated into this EA by reference.

Water quality - Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.

Determination: **No Significant Impact.**

The DEQ Clean Water Act website lists Sheep Creek (headwaters to mouth (Smith River)) as not fully supporting primary contact recreation or aquatic life but does support drinking water and agriculture use. DEQ has completed an E. coli TMDL, however the Clean Water Act website does not list the stream as threatened. There may be some temporary disturbances to water quality conditions related with installation of the infrastructure, but they are expected to be short-lived. There is a low likelihood that water quality will be adversely affected by this high spring flow application; if authorized, this permit would be subject to trigger flows based on water availability prior to any water being appropriated.

Impacts related to surface water quality are discussed in Section 3.5 of the Black Butte Copper Project EIS, which is incorporated into this EA by reference.

Groundwater - *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: **No Significant Impact.**

The proposed permit should not have a significant impact on ground water quality or supply. If authorized, the water right involved in this application would divert surface water from Sheep Creek to mitigate stream depletions related to the mine's groundwater appropriation.

Impacts from the mine's groundwater appropriation are discussed in Section 3.4 of the Black Butte Copper Project EIS, which is incorporated into this EA by reference.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: **No Significant Impact.**

The means of diversion is a wet well set adjacent to Sheep Creek, with a pipeline extending into the source. The point of diversion (POD), a 22-inch intake pipe, will be located in Sheep Creek in the SWNENW Section 30, T12N, R7E and will gravity feed an 8-foot diameter concrete manhole (wet well). Water will then be pumped from the wet well to the 291.9 AF capacity off-stream storage reservoir (NCWR) via 7,150 feet of 20-inch HDPE pipe. The NCWR is proposed in the N2 Section 31, T12N, R7E. Water is proposed to be diverted from the wet well by a variable frequency drive, 4-stage 425 horse-power vertical turbine pump at a rate up to 7.5 CFS. All diversions will be measured, and the intake pipe will be equipped with a fish screen. Only the pipeline extends into the source and is not anticipated that the proposed wet well structure will have a significant impact on the stream channel, riparian areas, or stream flows. The infrastructure used to store water

with this system is temporary but is proposed to help mitigate effects for up to 20 years after mine operations have ceased.

Impacts related to diversion works associated with the NCWR are discussed in Section 3.5 of the Black Butte Copper Project EIS, which is incorporated into this EA by reference.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species - Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any “species of special concern,” or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or “species of special concern.”

Determination: **No Significant Impact.**

As of December 2019, the United States Department of Interior Fish and Wildlife Service lists the following species as threatened in Meagher Co: Grizzly Bear and Canada Lynx. The Wolverine is listed as proposed and Whitebark Pine is listed as a candidate species.

The proposed project is not located in general sage grouse habitat therefore the Applicant does not have to consult with the Sage Grouse Habitat Conservation Program or obtain a letter regarding the consultation.

DEQ consulted the appropriate state and federal fish and wildlife agencies and reports in preparation of its analysis of potential impacts to fish, wildlife, plants, aquatic species, and specials of special concern for its Black Butte Copper Project EIS. Impacts related to threatened or endangered fish, wildlife, plants or aquatic species or any species of special concern are discussed in Sections 3.13, 3.15, and 3.16 of the Black Butte Copper Project EIS and are incorporated into this EA by reference.

Wetlands - Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.

Determination: **No Significant Impact.**

The USDI Fish & Wildlife Service – Wetlands Online Mapper shows both Freshwater Emergent and Forested/Shrub type wetlands adjacent to Sheep Creek and along the tributary stream channel proposed to be inundated by the NCWR. The website also shows Freshwater Forested/Shrub Wetland types adjacent to other stream channels in the area. These wetland types are generally only flooded for short periods and effects from construction of the wet well and pipeline should be temporary. The Applicant also proposes to use up to 57.7 AF annually to mitigate impacts to 96 acres of wetlands. The proposed wetland maintenance will occur between May 11 and June 11, annually.

Impacts related to Wetlands are discussed in Section 3.14 of the Black Butte Copper Project EIS and are incorporated into this EA by reference.

Ponds - *For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: **No Significant Impact.**

This permit application is being filed to divert high spring flows from Sheep Creek and temporarily store water for later use as mitigation water to offset surface water depletions resulting from a proposed groundwater permit for the mine. High spring flows are proposed to be diverted from Sheep Creek and temporarily stored for later use in an off-stream reservoir known as the NCWR. The NCWR is located on an unnamed tributary of Little Sheep Creek, which is a tributary of Sheep Creek. The reservoir impoundment will inundate 15.7 acres and may benefit some species by providing access to stored water, however it may also temporarily displace some wildlife species for up to 20 years after the life of the mine. The purpose of the NCWR is for temporary storage of both high spring flows and marketed water, no significant adverse impacts to wildlife, waterfowl, or fisheries is anticipated because of this off-stream reservoir.

Impacts related to this proposed reservoir are discussed in Section 3.5 of the Black Butte Copper EIS and are incorporated into this EA by reference.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: **No Significant Impact.**

No impacts to the soil profile are anticipated, the predominant soil complex in the area of the NCWR is non-saline. Assuming proper construction techniques are utilized, the wet well, pipeline and NCWR should not negatively impact soil quality, stability, or moisture content.

Impacts related to Geology are discussed in Section 3.6 of the Black Butte Copper Project Final Environmental Impact Statement. Impacts related to Soils are discussed in Section 3.10. Both sections are incorporated into this EA by reference.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: **No Significant Impact.**

There could be vegetative disturbances from installation of the wet well, pipeline and reservoir, however they are expected to be short-lived. No significant impacts to the vegetation are expected and it is the responsibility of the property owner to control noxious weeds on their property.

Impacts related to Vegetation are discussed in Section 3.13 of the Black Butte Copper Project EIS and is incorporated into this EA by reference.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: **No Significant Impact.**

An electric motor will power the pumps in both the wet well and the reservoir. No impacts to air quality or adverse effects to vegetation from increased pollutants are expected as a result of this proposal.

Impacts related to Air Quality are discussed in Section 3.2 of the Black Butte Copper Project EIS and are incorporated into this EA by reference.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: **N/A - Project not located on State or Federal Lands**

Impacts related to Cultural Resources are discussed in Section 3.3 of the Black Butte Copper Project Final Environmental Impact Statement and are incorporated into this EA by reference.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: **No Significant Impact.**

No additional impacts have been identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: **No Significant Impact.**

The Department is unaware of any locally adopted environmental plans or goals.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: **No Significant Impact.**

The proposal should not negatively impact recreational activities in the area, water will only be diverted when high spring flows are available in both Sheep Creek and the Smith River based on trigger flows to ensure all legal demands on the source are met. The Applicant also proposes to replace the entire appropriation in the Missouri River with a temporary water service contract from BOR.

Impacts related to Land Use and Recreation are discussed in Section 3.7 of the Black Butte Copper Project EIS and are incorporated into this EA by reference.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: **No Significant Impact.**

No impacts to human health have been identified. A small influx of employees related to construction may occur but should not have a significant impact on health concerns.

Impacts related to Socioeconomics, including health and quality of life, are discussed in Section 3.9 of the Black Butte Copper Project EIS.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*

Yes___ No X___ *If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.*

Determination: **No Significant Impact.**

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

- (a) Cultural uniqueness and diversity? **See Black Butte Copper Project EIS Section 3.3.**
- (b) Local and state tax base and tax revenues? **Tax revenues for both state and county will likely increase because of the mining activity profits. See Black Butte Copper Project EIS Section 3.9.**
- (c) Existing land uses? **The NCWR may inundate up to 15.7 surface acres in and around an Unnamed Tributary to Little Sheep Creek. Copper mine operations will temporarily disturb up to 311 surface acres of private land, with direct impacts up to 19 years. See Black Butte Copper Project EIS Section 3.7.**
- (d) Quantity and distribution of employment? **Employees will be needed for construction and maintenance of POD and reservoir facilities, the final EIS estimates up to 30% of project employees will come from within 110 miles of mine. See Black Butte Copper Project EIS Section 3.9.**

- (e) *Distribution and density of population and housing?* See Black Butte Copper Project EIS Section 3.9.
- (f) *Demands for government services?* There is a potential that the Black Butte Copper Project will result in increased demand for public infrastructure and services around White Sulphur Springs. Any fiscal impacts will be mitigated through payments made under the Hard Rock Mining Impact Plan. See Black Butte Copper Project EIS Section 3.9.
- (g) *Industrial and commercial activity?* This application is being proposed to offset surface water effects from industrial copper mine depletions.
- (h) *Utilities?* Electrical consumption may increase slightly when operating electrically driven pumps for water delivery to and from the reservoir.
- (i) *Transportation?* This specific application should not adversely affect transportation, however there will be increased traffic associated with mining activities. See Black Butte Copper Project EIS Section 3.12.
- (j) *Safety?* Hazard classification related to the 291.9 AF NCWR has been determined by MT DEQ Hard Rock Mining Program.
- (k) *Other appropriate social and economic circumstances?* See Black Butte Copper Project EIS Section 3.9.

2. *Secondary and cumulative impacts on the physical environment and human population:*

DEQ analyzed secondary and cumulative impacts of the Black Butte Copper Mine Project in Section 4 of the Black Butte Copper Project EIS, which is incorporated by reference into this EA.

3. *Describe any mitigation/stipulation measures:*

The Applicant will be required to adhere to a trigger flow condition in Sheep Creek and the Smith River that will ensure they only divert during times water is legally available. They also propose to purchase a Temporary Water Service Contract from the Bureau of Reclamation to replace the entire 291.9 AF of high spring flow diversions in the Missouri River. The Department may impose conditions to ensure required criteria are met.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:*

No action alternative: Deny Application for Beneficial Water Use Permit No. 41J 30116563. This alternative would result in none of the benefits being realized by the Applicant. The Montana Water Use Act, Title 85, Chapter 3, Montana Code Annotated requires the Department to issue a beneficial water use permit if the applicant proves the criteria in § 85-2-311, MCA.

PART III. Conclusion

1. Preferred Alternative

The preferred alternative is the proposed alternative, to grant Application for Beneficial Water Use Permit No. 41J 30116563.

2 Comments and Responses

The Department has not received comments on the Application for Beneficial Water Use Permit No. 41J 30116563 as of the date of this EA.

3. Finding:

Yes ___ No X Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

This EA is prepared in relation to the proposed permit application to appropriate high spring flows from Sheep Creek, however the Department is also adopting the Black Butte Copper Project EIS prepared by DEQ for the mine operating permit. The EIS provides an extensive analysis of the Black Butte Copper Project. The analysis provided in this EA is appropriate for the proposed action of issuing a beneficial water use permit. The Black Butte Copper Project EIS and related documents can be found on DEQ's website at the following link:
<http://deq.mt.gov/Mining/hardrock/Tintina-EIS>.

Name of person(s) responsible for preparation of EA:

Name: Doug Mann
Title: Hydrologist - Lewistown Regional Office
Date: 3/12/2020

ADOPTION OF EXISTING ENVIRONMENTAL REVIEW (EA/EIS)

Part I. Proposed Action Description

Applicant/Contact Name & Address: **Tintina Montana Inc.
17 E Main St.
White Sulphur Springs, MT 59645**

Type of Action: **Application for Beneficial Water Use Permit No. 41J 30116563**

Location Affected by Action: **Sections 1, 2, 11, 12, and 13 Twp 12N Rge 5E; Sections 3, 4, 5, 6, 10, 11, 12, 13, 18, 19, 20, 21, 22, 24, 25, 26, 27, 35, and 36 Twp 12N Rge 6E; Sections 18, 19, 30, and 31 Twp 12N Rge 7E, all in Meagher Co**

Narrative Summary of Proposed Action: **Applicant proposes to appropriate water from Sheep Creek during high spring flows to store in an off-stream reservoir. Water will be released from the reservoir throughout the year to partially mitigate stream depletions from the Black Butte Copper Project's withdrawal of groundwater for Industrial use. In addition to mitigation of stream depletions related to the copper mine's diversion, the Applicant proposes to maintain any wetlands that may be impacted by monitoring and mitigating effects. Water will be diverted from Sheep Creek via a pipeline and wet well and pumped to the off-stream reservoir when water is legally available from May 1 through July 31. A 291.9 AF storage reservoir, referred to as the Non-Contact Water Reservoir (NCWR), is proposed for construction on an Unnamed Tributary of Little Sheep Creek. Releases from the NCWR will mitigate adverse effects caused from modeled depletions to Sheep Creek, Black Butte Creek, Coon Creek, and area wetlands. The maximum flow rate proposed for this permit application is 7.5 CFS and a total annual volume of 291.9 AF.**

The Montana Department of Natural Resources and Conservation (DNRC) prepared an Environmental Assessment (EA) which considers the potential impacts related to the proposed action of granting Beneficial Water Use Permit No. 41J 30116563. The Montana Department of Environmental Quality (DEQ) has prepared an Environmental Impact Statement (EIS) for the mine operating permit. This EA incorporates by reference relevant sections of DEQ's EIS.

Part II. Existing Environmental Review Information

Title: **Black Butte Copper Project Final Environmental Impact Statement**

Lead Agency: **Montana Department of Environmental Quality (DEQ)**

Location Where Interested Parties Can View or Obtain the Document:

<http://deq.mt.gov/Mining/hardrock/Tintina-EIS>.

Part III. Criteria for Adopting Existing Environmental Review

<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Does the existing environmental review cover an action paralleling or closely related to the proposed action?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the information in the existing environmental review accurate and clearly presented?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Is the information in the existing environmental review applicable to the action being considered?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Were all appropriate Agencies consulted during preparation of the existing environmental review?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Were alternatives to the proposed action evaluated as part of the existing environmental review effort?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Have all of the impacts of the proposed action been accurately identified as part of the existing environmental review?
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	If the existing environmental review identifies any significant impacts as a result of the proposed action, will they be mitigated below the level of significance?

Part IV. Conclusion

If the answers to ALL of the questions listed above are "Yes", the existing environmental review can be considered sufficient to satisfy DNRC's MEPA review responsibilities.

Yes ☐ No ☒ Based on the criteria evaluated in the existing EA, is an EIS required?

**** DNRC prepared an EA for the proposed action which is tiered to the Black Butte Copper Project EIS prepared by DEQ for the mine operating permit. The Black Butte Copper Project EIS provides an extensive analysis of the Black Butte Copper Project. The analysis provided in DNRC's EA is appropriate for the proposed action of issuing a beneficial water use permit.**

Name: Doug Mann
Title: Hydrologist - Lewistown Regional Office
Date: 3/12/2020